

## **ABSTRACT OF THE DISCLOSURE**

The invention provides an apparatus and method for detection of a target molecule. The apparatus includes a probe labeled with a transition metal-ligand complex that hybridizes with the target to form an initial complex, a metal ion for doping the initial complex and forming a final complex, and a potential means for providing a potential to the final complex to produce a detectable signal indicating the presence of the target after redox reaction. The method of the invention teaches the steps of hybridizing a probe with an attached label to the target to produce an initial complex, adding a metal ion to the initial complex to form a final complex and applying a potential to the final complex to produce a measurable signal.